

Single Fire Coil P35-E / P35-TE

For this single fire coil the customer can define the length of the spark plug connector.

The P35-E coil [1|2] has no integrated power stage and is developed for use with ECUs that have integrated ignition transistors.

The P35-TE [3|4] has an integrated transistor for use with ECUs that have ignition power stages with 10 mA to 20 mA current output.

The length of the spark plug connector can be defined by customer. The single fire coil benefits from series production ensuring robustness.



Application

Spark energy	≤ 38 mJ
Primary current	≤ 7.5 A
Operating temperature range @ outer core	-20 ... 140 °C
Storage temperature range	-40 ... 100 °C
Max. vibration	≤ 400 m/s ² @ 5 ... 2,500 Hz

Electrical Data

Primary resistance with wire	[1 2] 760 mΩ [3 4] Incapable of measurement
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 2.0 kV/μs
Max. high voltage @ 1 MΩ 10 pF	≤ 34 kV
Spark current	≤ 90 mA
Spark duration @ 1 kV 1 MΩ	≤ 1.13 ms
Noise suppression	Inductive
Suppression diode / EFU	Yes
Integrated power stage	[1 2] No [3 4] Yes
Ionic current signal	No

Mechanical Data

Length	≤ 225 mm
Weight	194 ... 250 g
Mounting	screw fastening

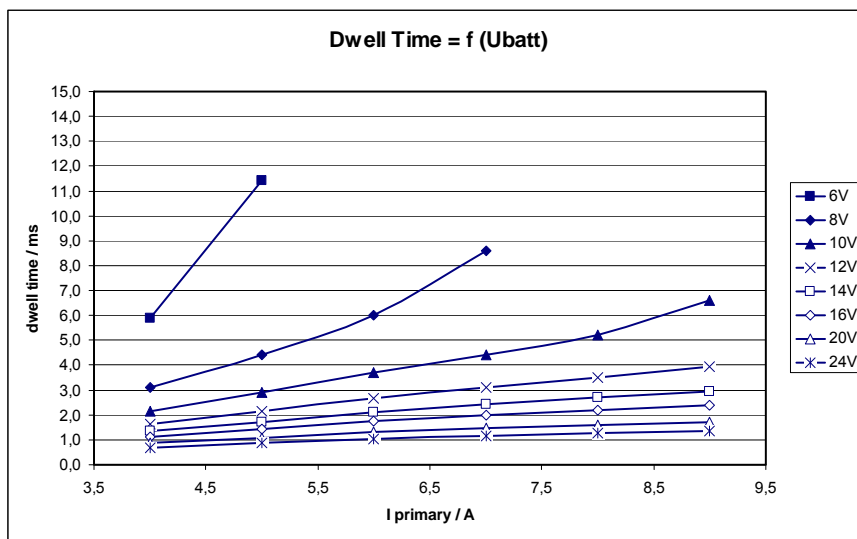
Characteristic

Measured with power stage	[1 2] IGBT IRG4BC40S (U _{ce} = 600 V) [3 4] BIP 373
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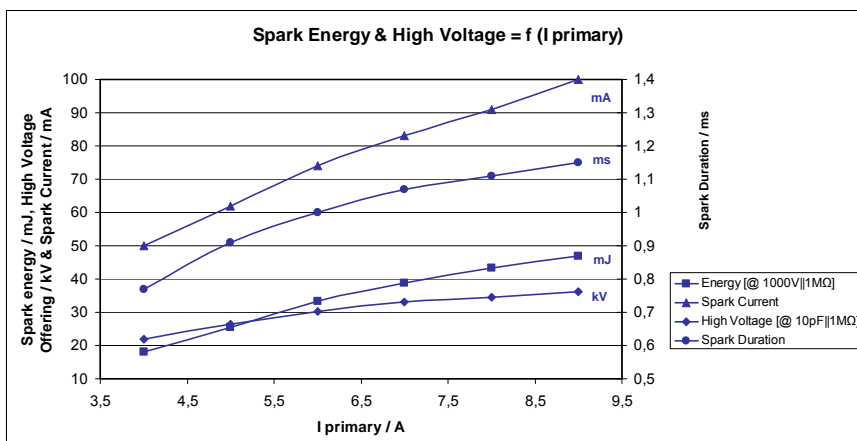
Characteristic Dwell Time [ms]

I primary	U batt									
	6 V	8 V	10 V	12 V	14 V	16 V	18 V	20 V	22 V	24 V
4.0 A	5.9	3.1	2.2	1.6	1.4	1.1	1.0	0.9	0.8	0.7
5.0 A	11.4	4.4	2.9	2.1	1.7	1.4	1.2	1.1	1.0	0.9
6.0 A		6.0	3.7	2.7	2.1	1.8	1.5	1.3	1.2	1.0
7.0 A		8.6	4.4	3.1	2.4	2.0	1.7	1.5	1.3	1.2
8.0 A			5.2	3.5	2.7	2.2	1.9	1.6	1.4	1.3
9.0 A			6.6	3.9	3.0	2.4	2.0	1.7	1.5	1.4

Measured values are without loom resistance. Loom resistance must be less than the primary resistance.
The needed dwell time is to be verified through current measurement.


Characteristic Spark Energy & High Voltage

	I primary					
	4 A	5 A	6 A	7 A	8 A	9 A
Spark energy [mJ]	18	25.4	33.4	38.8	43.3	47
Spark duration [ms]	0.77	0.91	1	1.07	1.11	1.15
Spark current [mA]	50	62	74	83	91	100
High voltage [kV]	22	26.5	30.3	33	34.5	36.2



Connectors and Wires	
Connector	Sumitomo
Mating connector	D 261 205 367
Pin 1	[1 2] ECU Ignition Driver Stage [3 4] ECU Ignition Signal
Pin 2	ECU Gnd
Pin 3	Ubatt
Various motorsport and automotive connectors are available on request.	
For spark plugs	[1 3] ceramic diameter d = 8 mm [2 4] ceramic diameter d = 10 mm
Spark plug connector	85 ... 225 mm
Various motorsport and automotive connectors are available on request.	
Please specify the required wire and spark plug connector length with your order.	

Application Hint
During mounting of the spark plug please pay attention that full clamping and proper contacts are made to ensure safe connection between coil and spark plug.
Please pay attention to your spark plug, if it is a spark plug with a ceramic diameter 8 or 10 mm.
For coils without "-T", please only use with engine control units with an integrated ignition power stage, e.g. IGBT IRG4BC40S.
The coils with "-T", please only use with engine control units without integrated power stages.
For technical reasons the values of the coils may vary.
Please only use within specified limit values.
Please find further application hints in the offer drawing (http://www.bosch-motorsport.com).

Part Number	
Coil P35-E [1]	F 02U V00 235-01
Coil P35-E [2]	F 02U V00 440-01
Coil P35-TE [3]	F 02U V00 234-01
Coil P35-TE [4]	F 02U V00 439-01

